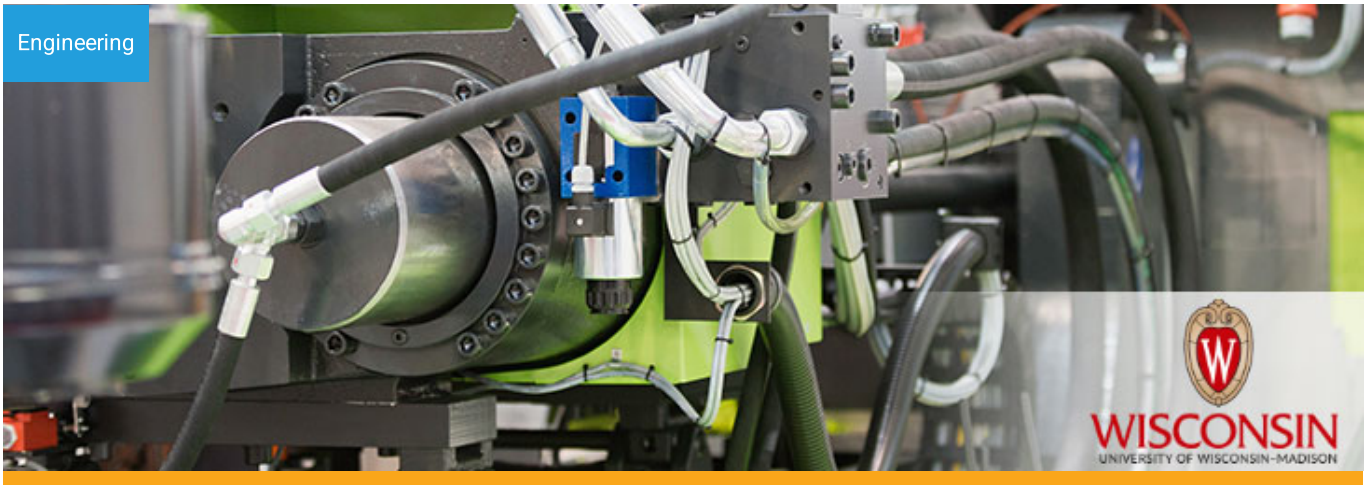

Vernier Machine With Shaped Permanent Magnet Groups

View U.S. Patent No. 10,886,801 in PDF format.

WARF: P180005US01

Inventors: Thomas Lipo, Wenbo Liu

The Invention

An electric machine includes a rotor, permanent magnets, a stator, and a stator winding wound about a plurality of teeth to form a number of stator magnetic poles. The rotor includes a rotor core and a plurality of walls that form openings in the rotor core. A permanent magnet is mounted in each of the openings formed in the rotor core. The plurality of permanent magnets are arranged to form a plurality of groups of permanent magnets that are equally circumferentially distributed around the rotor core with an interior polarity on a side of each permanent magnet facing other permanent magnets of the group of permanent magnets to which the permanent magnet is associated that is the same for all of the permanent magnets. Each permanent magnet is arranged to form a rotor pole, wherein a number of rotor poles is greater than the number of stator magnetic poles.

Tech Fields

- Engineering : Electric machines

For current licensing status, please contact Michael Carey at mcarey@warf.org or 608-960-9867

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